

Title (en)

Determination of the hydrodynamic radii and/or content of constituents of a mixture by analysis of the Taylor dispersion of the mixture in a capillary tube

Title (de)

Bestimmung der hydromechanischen Radien und/oder des Inhalts an Bestandteilen einer Mischung durch Analyse der Taylor-Dispersion der Mischung in einem Kapillarröhrchen

Title (fr)

Détermination des rayons hydrodynamique et/ou du contenu de composants d'un mélange par analyse de la dispersion Taylor du mélange dans un tube capillaire

Publication

EP 2148198 A1 20100127 (EN)

Application

EP 08305409 A 20080721

Priority

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Abstract (en)

A method for analysing a mixture M comprising (i) a first monodisperse species, and (ii) a second species having a response coefficient which is distinct from the response coefficient of the first species (i) on at least one detection device, said method comprising the following steps: (A) the mixture M is injected at the inlet of a capillary tube and forced to be transported in said tube by the flow of a carrier liquid induced by a positive hydrodynamic and/or hydrostatic pressure between the inlet and the outlet of the capillary, whereby a phenomenon of Taylor dispersion of the species of the mixture M occurs in the tube; (B) by using a detection device able to detect simultaneously both species (i) and (ii) and placed in the region of the outlet of the capillary tube, a signal reflecting the Taylor dispersion obtained in step (A) is measured; (C) the signal obtained in step (B) is analysed, so as to determine specific contributions of species (i) and (ii) and thereby establishing at least one of the followings: - the content of species (i) and/or (ii) in the mixture M; and/or, - the mean hydrodynamic radius of the species (ii) or (i).

IPC 8 full level

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Citation (applicant)

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